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## **Re: Discussion Paper - Reducing Methane Emissions From Canada's Municipal Solid Waste Landfills**

On behalf of Ontario's more than 3,000 environment and cleantech firms, the Ontario Environment Industry Association (ONEIA) is pleased to provide our comments to the noted posting where Environment and Climate Change Canada (ECCC) is seeking input on the proposed objectives of regulations under the Canadian Environmental Protection Act, 1999 (CEPA) to reduce methane emissions from municipal solid waste landfills.

### **About ONEIA**

Ontario is home to Canada's largest group of environment and cleantech companies. The most recent statistics from the federal government show that Ontario's environment sector employs more than 226,000 people across a range of sub-sectors. This includes firms working in such diverse areas as materials collection and transfer, resource recovery, composting and recycling solutions, alternative energy systems, environmental consulting, brownfield remediation, and water treatment – to name just a few. These companies contribute more than \$25-billion to the provincial economy, with approximately \$5.8-billion of this amount coming from export earnings.

ONEIA members are committed to engaging with governments as they develop policies and regulations that are consistent with our principles of sound science, sound environment, and a sound economy. To that end, we convened a working group of our members drawn from across the resource recovery sector to review the methane emissions discussion paper and attend the March 2022 information webinar hosted by ECCC. ONEIA's resource recovery members provide a diverse range of services including collection and transfer, organic and blue box recycling solutions, alternative energy systems, and landfill and waste to energy disposal.

### **Specific Comments to the Regulatory Objectives**

ONEIA supports and agrees that additional regulatory action is needed to help reduce and eventually eliminate landfill methane emissions to the atmosphere. ONEIA engaged multiple members of our interdisciplinary sector team to develop our comments and we have structured our submission to follow the organization and flow of the posted discussion paper.

## Objective 1

### Increase the number of landfills that take action to reduce methane emissions.

***What criteria should be used to identify which landfills should be subject to regulatory requirements to reduce their methane emissions?***

When developing criteria to identify which landfills will be subject to regulatory requirements, we strongly believe the ECCC should consider the following key elements:

- Whether a landfill is active or inactive;
- The annual permitted volume and the remaining life of a landfill; and
- The waste stream types that a landfill is permitted to accept.

We recommend that any development of a regulatory approach, also consider:

- Providing incentives to promote generator level policies to segregate organic waste to ensure the cleanest materials to work with;
- Incentivizing landfill owners to implement mitigation measures that reduce emissions;
- Development of offsets, renewable natural gas (RNG) blending mandates, and a Clean Fuel Standard; and
- Federal funding that supports research and innovative approaches at small landfills.

***In Canada and the United States, the existing landfill methane regulations require the installation of landfill gas recovery systems where certain landfill size, methane generation or surface methane emission concentration thresholds are exceeded. Are there other approaches that could be considered to ensure that landfills reduce methane emissions?***

We believe any regulation should provide incentives to reduce methane emissions using a myriad of tools such as organic waste diversion programs, and/or renewable gas blending mandates. Reducing the amount of fugitive methane through the collection and conversion of landfill-generated methane to a beneficial energy source that replaces traditional fossil fuels is more environmentally and economically effective and efficient than simple collection and destruction.

We also believe that any new regulations should strive to enhance and support existing provincial regulations to maximize methane recovery at landfills with:

- Incentives to encourage the use of more efficient landfill gas capture systems;
- The use of new and existing offset protocols and RNG mandates to bolster the business case;
- Federal funding to support research and innovation to improve efficiencies; and
- Standardized measurement and reporting.

***Current Canadian provincial landfill methane regulations do not apply to closed landfills. By contrast, closed landfills are regulated in the United States. What are the options for reducing methane emissions at closed landfills in Canada, where methane levels may be significant, but declining?***

We believe that landfill methane regulations should apply to closed landfills that meet certain parameters. As an example, closed or inactive [landfills in California](#) with less than 450,000 tons of waste-in-place are exempt from landfill methane regulations. The emissions from landfills under a prescribed volume is a small percentage that does not justify taking action at this time.

***What are the main challenges that landfill owners would face to meet the federal regulation's objective of reducing methane emissions? How can existing provincial approaches be leveraged in the design and implementation of a federal regulation?***

We believe the main challenge landfill owners would face in meeting new regulations to reduce methane emissions is the financial burden that they could impose. If the federal government decides to enact new requirements, it is strongly recommended that a funding program be provided, especially for small to medium sized landfills.

Most landfills in Canada are municipally owned and any new regulatory requirements would have an immediate impact on municipal budgets which are currently constrained.

Any requirements should also embrace the role of the waste generators to separate organics at the source. For example, almost all of industrial, commercial, and institutional (ICI) solid waste in Ontario is collected and aggregated at waste transfer stations prior to being sent to landfills in Canada and the United States. Generator level policies would allow biodegradable wastes to be separated at the source. Using co-collection vehicles, waste collection firms could segregate the wastes at their transfer stations to allow for delivery to the appropriate destinations (i.e. anaerobic digestion or composting for the biodegradable wastes and landfills or Energy from Waste facilities for the other materials).

We advocate that setting the framework for diversion efforts that reduce methane emissions should be the Federal government's primary focus. A coordinated Federal plan to address this matter and provide the foundation for economies of scale and cost effectiveness at the generator level is necessary.

A coordinated federal plan to address this matter can include:

- Producing an awareness/public education campaign to drive sustained consumer behaviour change in all sectors to avoid and reduce food loss and waste.
- Collaborating with retailers to develop and promote "smart shopping" offerings and merchandising to support consumer behaviour change (e.g., smaller sizes, information on best before dates).
- Promoting the reallocation of surplus food by supporting food rescue organizations through food donation provisions in government catering contracts including food waste reduction measures.
- Developing a national organic waste diversion plan, that includes:
  - Progressive source separation requirements for ICI entities starting with the largest organizations that generate organic waste;
  - Mechanisms to help maintain and expand current infrastructure, develop new infrastructure, and incent better environmental and economic outcomes;
  - Sufficient time to allow for proper planning and consultation;
  - A phase-in of smaller generators and exemptions for unique environments; and
  - Provisions to ensure proper oversight and enforcement mechanisms.
- Creating incentives for reduction or diversion activities using different mechanisms to address the true cost of waste, climate change, and greenhouse gas (GHG) reductions. Incentives should be allocated to municipal governments and eligible private sector stakeholders through a joint fund established to reduce waste, increase waste diversion, and promote other activities that reduce GHG emissions.

***Are challenges similar for large and small landfills? Are there opportunities to reduce methane emissions at smaller landfills in Canada? What type of incentives could encourage the development of innovative technologies (for example, biocovers) for smaller landfills?***

The challenges for large and small landfills are realizing economies of scale related to the equipment and staff required to address methane emissions. In some cases, these landfills are in remote locations and providing the service/support required to manage methane in these instances is very challenging.

For example, in 2008 when Ontario placed new rules that required operating landfills larger than 1.5 million cubic meters to implement methane collection systems, Ontario also provided \$10 million in funding to help municipalities defray the cost to comply. A similar funding program would help landfills facing new regulations overcome this barrier.

## **Objective 2**

**Ensure that landfills maximize methane recovery.**

***What are the key opportunities and approaches for maximizing methane recovery at landfills with landfill gas recovery systems?***

We feel that the key opportunities and approaches for maximizing methane recovery at landfills with methane recovery systems include:

- Incentives to encourage the use of more efficient landfill gas capture systems;
- The use of new and existing offset protocols and RNG blending mandates to bolster the case;
- Federal funding to support research and innovation to improve efficiencies; and
- Standardized measurement and reporting.

## **Objective 3**

**Achieve long-term emissions reductions through diversion of biodegradable waste.**

***Taking action to reduce methane emissions from landfills is essential to reducing emissions by 2030. Should federal regulations require landfill owners to reduce landfilling of biodegradable waste?***

We believe the regulation should focus on organic waste diversion at the source rather than focussing on the landfills, because landfills are at the end of the line rather than at the beginning of the supply chain. However, regulations could provide incentives for a landfill to reduce the amount of methane generated using tools such as organics diversion, waste stabilization or implementation of a renewable blending gas mandate. All of these can help to reduce GHG emissions and promote the production of renewable fuels which is much more effective than collection and destruction, particularly if the collected methane is not utilized for beneficial purposes.

Disposal bans applied in the traditional way to Ontario landfills could have unintended consequences, and could undermine waste diversion and further compromise the goal of self-sufficiency in waste management system capacity. If a disposal ban were imposed on Ontario landfills, the economics may spur increased waste export. More waste volume could migrate to the disposal capacity available in adjacent U.S. jurisdictions. Such an outcome would not be helpful for either the disposal or recycling

sector in Ontario, nor would it support achievement of the overall objective of reducing landfill GHG emissions.

***What opportunities exist to incorporate biodegradable waste diversion into a landfill methane emission reduction plan?***

We encourage a source separated organic waste program for municipalities with 50,000+ Canadians as one way to ensure biodegradable waste is source separated and diverted to extract value. It is now widely accepted that to achieve maximum diversion and downstream value, materials need to be sorted at the source; which is relevant in the case of ICI generators such as restaurants and grocers. This action allows for resource recovery approaches and the development of a circular economy that conserves valuable resources.

Incentivising the diversion of biodegradable waste to anaerobic digestion and composting facilities would be one forward thinking policy that would help to reduce the associated methane emissions. Furthermore, an added benefit with anaerobic digestion is an increase in Canada's production of RNG to offset fossil sources. As a carbon negative energy source, increased supply of RNG gas helps drive the decarbonization of Canada's energy system while diversifying the system to support long-term energy security for Canada.

## **Objective 4**

### **Increase utilization of landfill methane to create low-carbon energy and fuels.**

***Are there options that should be considered within a federal landfill methane regulatory framework to require or encourage the utilization of recovered methane to produce low-carbon energy?***

We strongly support the utilization of recovered methane to produce low-carbon energy. The pathway includes a renewable gas blending mandate (i.e. 15 percent by 2030) with standards and content requirements, similar to current ethanol blending for gasoline. This approach will incent landfills to utilize the methane to make energy products.

A [new report](#) by the Canadian Biogas Association, based on modeling by Navius Research, found that an optimal policy mix, including an RNG mandate and methane offset credits, could reduce GHG emissions by 16.6 MTCO<sub>2e</sub>/year by 2030. All forms of RNG would be assessed on a carbon intensity basis to support the federal government's net zero goals.

***How will a regulatory approach on landfill methane affect policy and other goals to increase the production of renewable natural gas?***

We advocate that care be taken to ensure that any new regulations do not exempt landfills from monetizing methane as a low-carbon fuel. The ability to sell environmental attributes and RNG will be crucial to incentivize landfills to reduce methane emissions while providing the added benefit and value of offsetting fossil fuels. However, we should ensure that landfill gas is accounted for properly in terms of carbon intensity, especially when compared to RNG produced through anaerobic digestion.

ONEIA welcomes the opportunity to discuss our position and recommendations further. Please contact our office at [info@oneia.ca](mailto:info@oneia.ca) or at (416) 531-7884 should you have any questions.

Yours truly,



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